

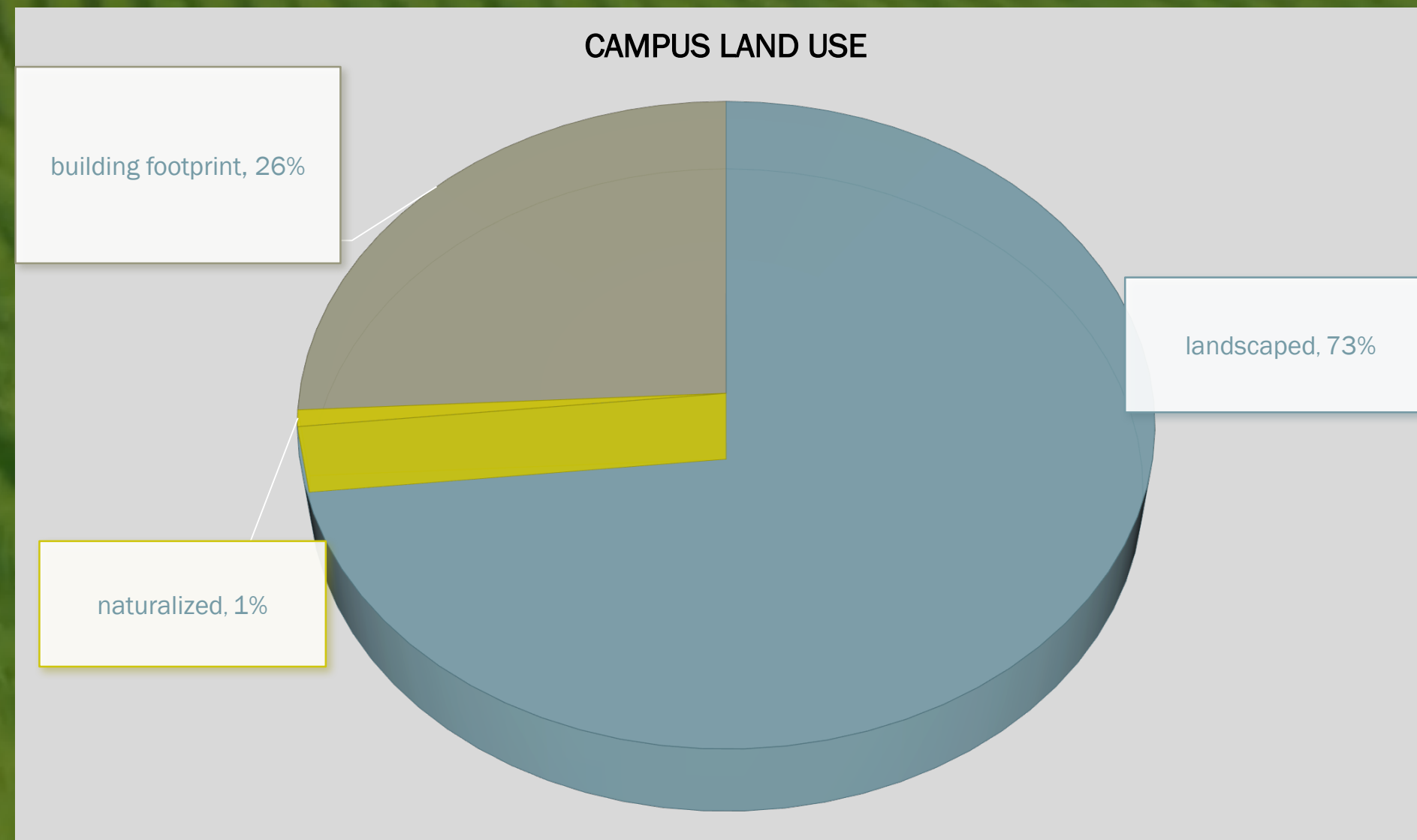
How Tree Campus USA Program Accelerated Environmental Stewardship at Georgia Tech

By
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Georgia Tech campus is located on a 426 acres of land

312.5 acres = Landscaped 3.5 acres = Naturalized
110 acres = Buildings



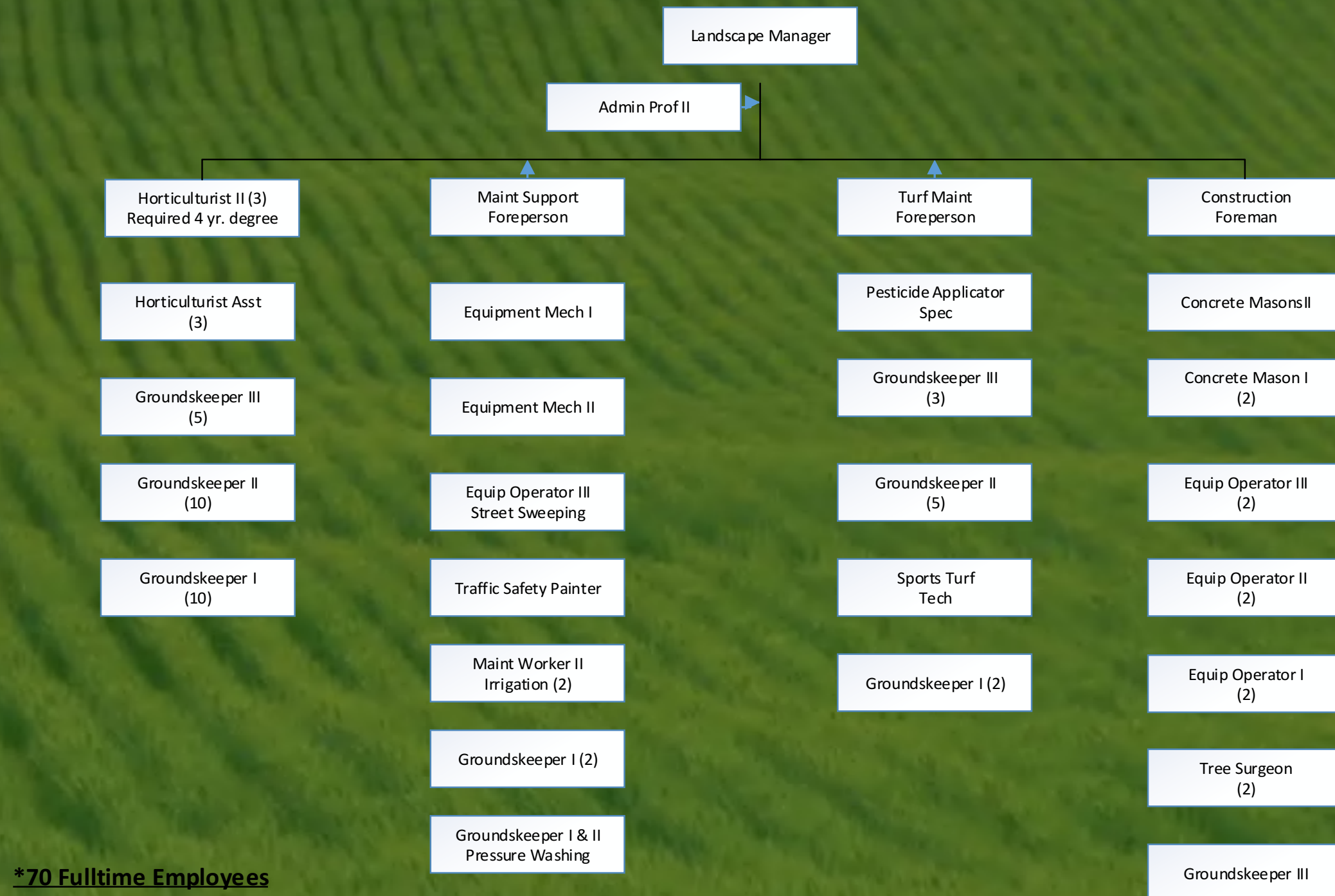
The Landscape Services Department is charged with the maintenance of both the landscape and hardscape, including the 12,000 trees on campus.

Two functional divisions; Landscape Services:

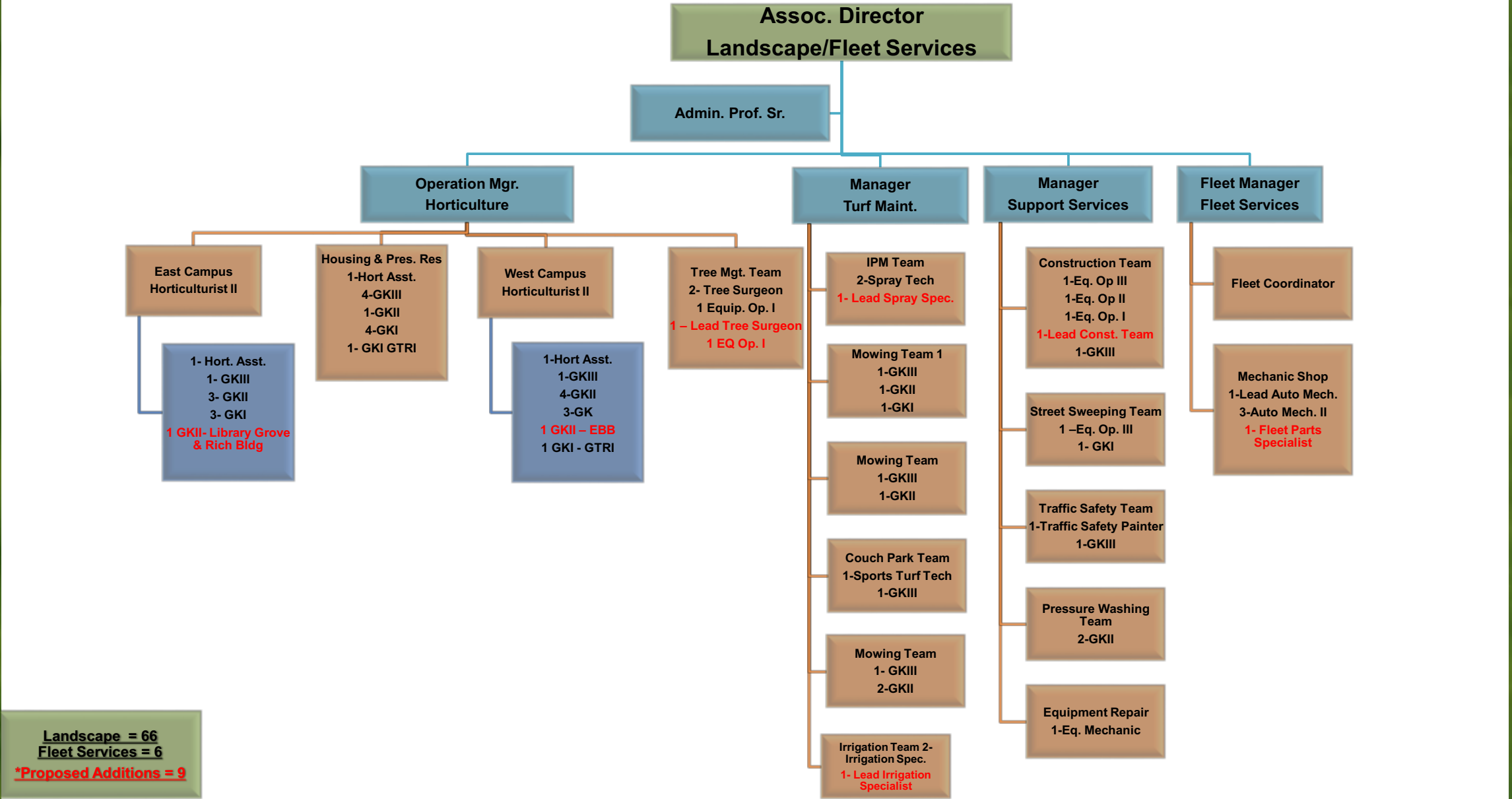
- **Landscape Services** with 66 fulltime employees
- **Fleet Services** with 6 fulltime employees including an Associate Director and a Administrative Professional Sr.

DEPARTMENT MISSION: Enable Georgia Tech to achieve its goal of environmental sustainability by maintaining an integrated, ecologically-based landscape and open space system that serves as a beautiful, attractive and safe campus environment where students, faculty, staff and visitors can enjoy, live, work and study in comfort.

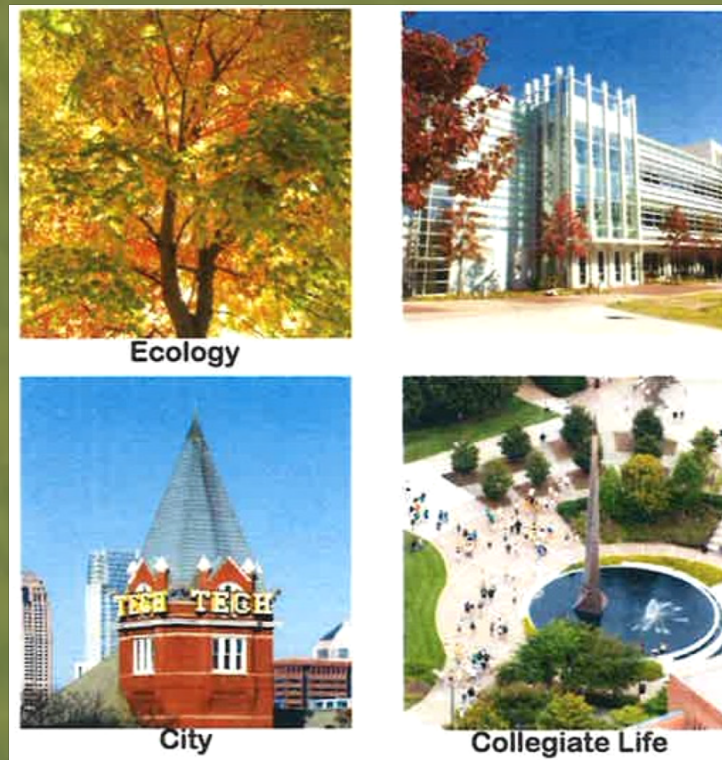
Landscape Services Organization Chart 2001



Proposed Landscape Services Organizational Chart 2016



Georgia Tech's quest for environmental stewardship began in 2004 by establishing The Campus Landscape Master Plan, updated in 2006 and 2010, before being recognized as a Tree Campus USA in 2008 by the Arbor Day Foundation.



Landscape Master Plan Objectives:

1. To increase campus tree canopy to a minimum of 55%
2. To increase campus woodland coverage to 22%
3. To use predominately native plants or ecologically appropriate to this region for planting
4. To increase biodiversity in the plant population
5. To reduce storm water discharge into the Atlanta sewer system

Tree Campus USA

In 2008, Georgia Tech was approached by the Arbor Day Foundation through the Georgia Urban Forest Commission (GUFC) to participate in the newly established national program “Tree Campus USA”.

- Aimed at fostering the development of the next generation of tree stewards.
- Designed to award national recognition to college campuses and the leaders of their surrounding communities for promoting healthy urban forest management and engaging the campus community in environmental stewardship.
- To be recognized as a Tree Campus USA, the college campus must meet five core standards for sustainable campus forest



Tree Campus USA

Standard One for Sustainable Campus Forest

1. Establishment of a Campus Tree Advisory Committee composed of students, faculty, staff and community leaders surrounding the campus.

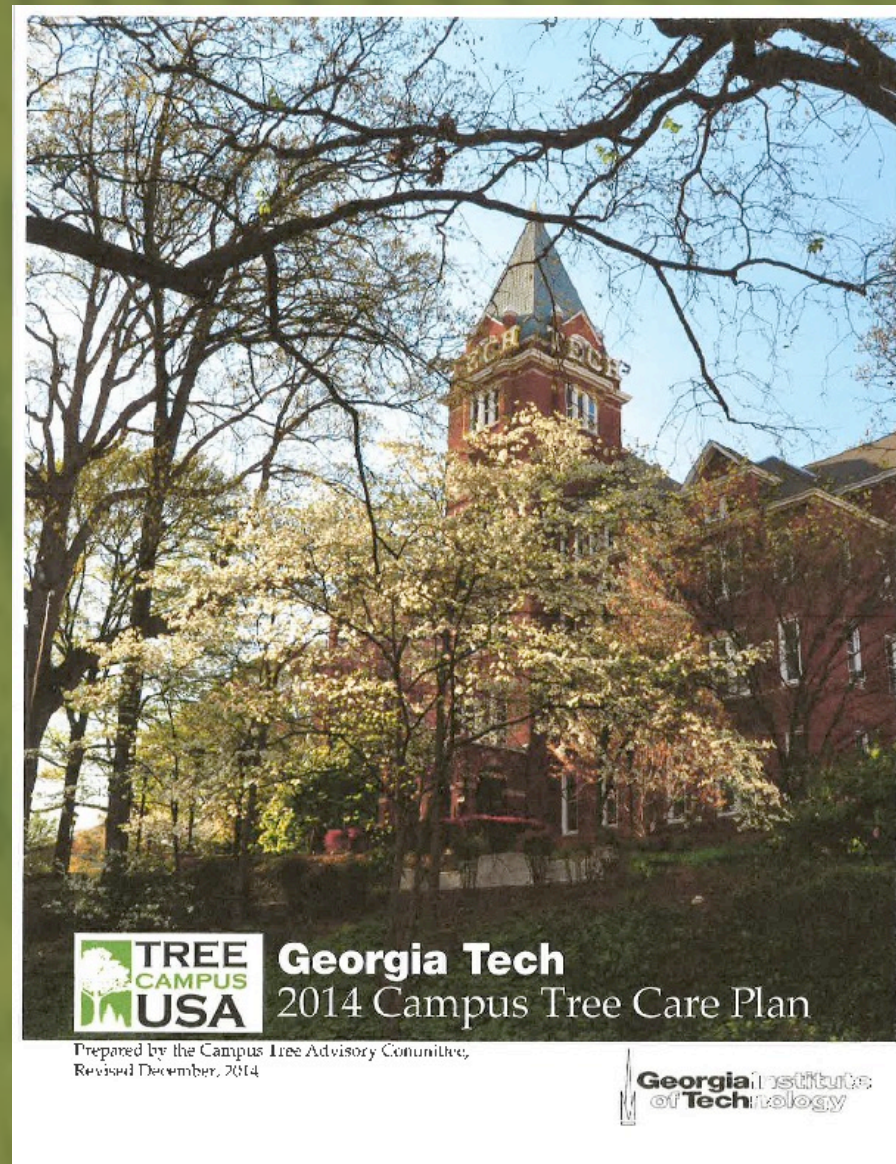
At Georgia Tech, the committee is composed of members from Facilities, CPSM, Parking, Housing, GTRI, students and faculty, Home Park, Midtown and Vine City communities. It holds monthly meetings, developing and updating the Georgia Tech Tree Care Plan every five years and applying for the yearly recognition since 2008.



Tree Campus USA

Standard Two for Sustainable Campus Forest

2. Provide a Campus Tree Care Plan flexible enough to fit the campus needs and circumstances, including goals regarding tree planting, tree replacement canopy cover, GIS Tree Inventory, maintenance, removal, etc.



Georgia Tech's 2009 Tree Care Plan is used as a sample on the Arbor Day's website under Tree Campus USA application procedures.

Tree Campus USA

Standards Three, Four, Five

3. Have dedicated annual budget $27,000 \times \$3.00 = \$81,000.00$ expenditure to satisfy this condition. This means that most college campuses can satisfy the expenditure requirement. Georgia Tech's current expenditure is \$642,320.00.

4. Arbor Day observance is a day set aside to educate the campus community on the importance and benefits of trees on campus and the community at large, such as Earth Day.



5. Service Learning Project: Tech Beautification Day (TBD)

Conducting Tech Beautification in March/April as the Service Learning Project exposes students to most aspects of environmental stewardship by participating in tree plantings, shrub planting, mulch & pine straw spreading, etc. to beautify the campus. TBD also provides over 1,500 hours of free labor per year to Georgia Tech, about \$27,000 each year.

The recognition of Georgia Tech as a Tree Campus USA signifies its commitment toward environmental stewardship by developing tomorrow’s leaders-students.

Some of the benefits of Tree Campus USA at Georgia Tech are:

The creation of the Tree Campus USA Advisory Committee was most challenging and also very rewarding. It brought staff, students, faculty & committee leaders under one roof to plan and execute programs that have serious impact on our environment, such as tree replacement, tree safe zone, tree removal, etc.

STUDENT VOLUNTEERS NEEDED!!



The Georgia Tech Campus Tree Advisory Committee* is looking for student representatives

*The Campus Tree Advisory Committee is comprised of members representing the diverse audience of those with a stake in Georgia Tech's campus trees.

In 2008, Georgia Tech was recognized as a Tree Campus USA Campus. The Tree Campus USA program is an initiative that sprang from a partnership between Arbor Day Foundation and Toyota Motor North America, Inc. to foster the development of the next generation of tree stewards. The program is designed to award national recognition to college campuses and leaders of their surrounding communities for promoting healthy urban forest management and engaging the campus community in environmental stewardship.

Since the main objective of the Tree Campus USA is to educate students (next generation) on the importance and care of trees, the Georgia Tech Tree Campus USA Advisory Committee is asking for student volunteers to become committee members. The Advisory Committee meets monthly on the second Thursday of each month at 11:00 a.m. in the conference room of Landscape Services at 947 Atlantic Drive on campus.

Students are encouraged to volunteer as advisory committee members.
If you are interested, contact treecampususa@lists.gatech.edu.



STUDENT VOLUNTEERS NEEDED!!



How many trees are on campus?

- A) 1000
- B) 12,000
- C) 30,000



Campus Landscape Master Plan

Helps to accelerate the implementation of the Georgia Tech Campus Landscape Master Plan objectives of increasing tree canopy cover to a minimum of 55%, increasing woodland to 22% etc.

- 2004 Estimate = Campus had 5,000 trees with 15-18% tree canopy.
- Today, = **12,000** trees that are greater than 2" caliper with a tree canopy of 25%.



Georgia Tech Tree Bank

A tree removal replacement program resulting from construction or development work on campus.

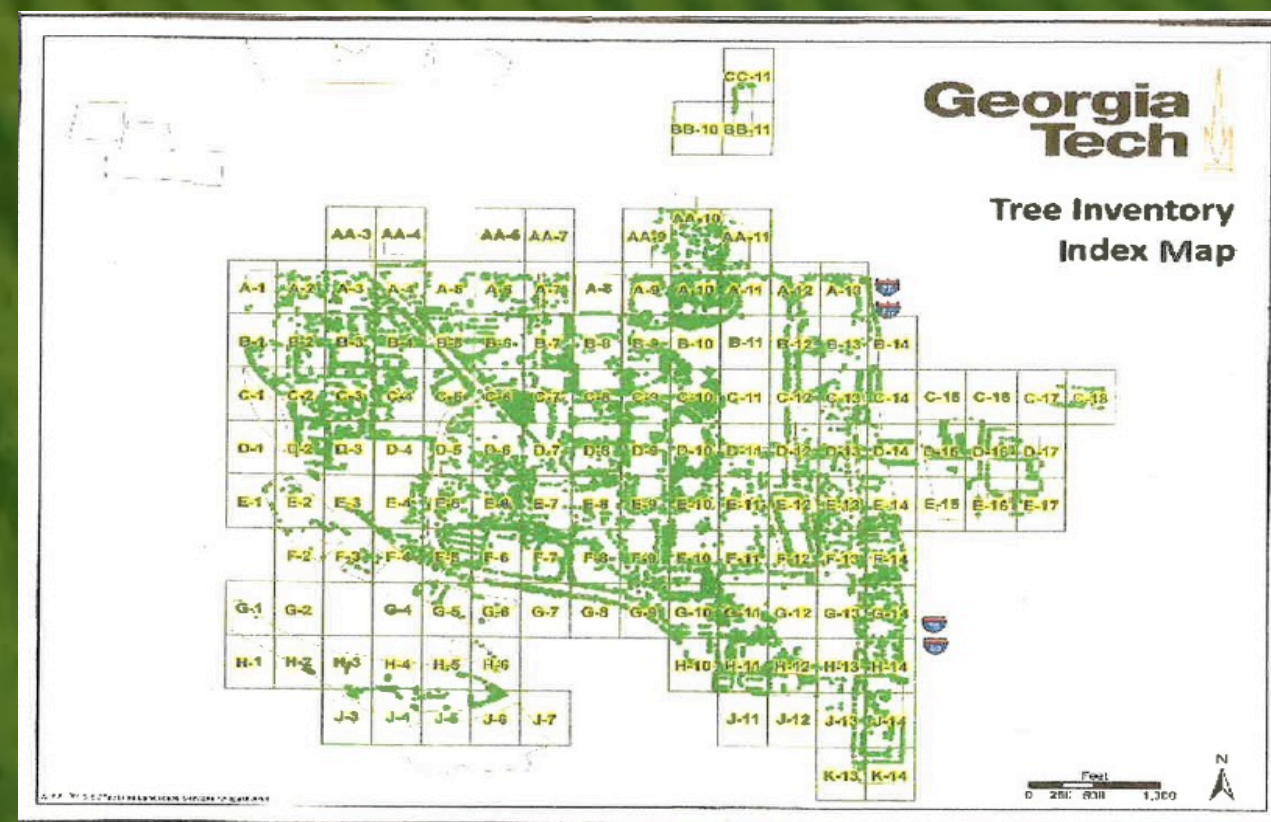


The replacement formula is based on the 2006 Campus Landscape Master Plan as a 1" diameter removed shall be replaced by 1" diameter at a cost of \$200/inch. The Tree Bank is to track and receive whatever was lost and was not replaced on the site.

GIS Tree Inventory –

Completed in 2012 as part of the Tree Care Plan goal. Staff are now trained and capable of updating the database as new trees are planted, pruned, treated or removed.

It also revealed the actual number of trees, types, conditions on campus from an estimated 7,000 in 2008 to 11,000 in 2012 and over 12,000 in 2017 when it was completed. Thus providing a better understanding on what we have to work with and the resources required.



Risk Management: 50 trees Classified Priority 1, i.e. High Risk (unsafe or dangerous) out of the 11,046 trees inventoried at the time. These 50 trees were further evaluated by an ISA Certified Arborist to determine the necessary actions (s) to be taken to include fertilizer application, disease/insect control, pruning or removal. All property owners, including the Greek, Housing, Parking, AA and GTRI were notified of their tree conditions and were advise to consult with an ISA Certified Arborist to obtain acceptable assessment results and the implement the recommendations.

How much are the trees on campus worth?

- A. 1 million
- B. 12 million
- C. 50 million



Campus Arboretum

The GIS Tree Inventory provided the platform for Tech becoming an arboretum campus because of the value of our campus trees resulting from the GIS Tree Inventory as one of the goals in the Tree Care Plan.

It is estimated that the total campus trees are valued at over \$12,000,000.



Bee Campus USA

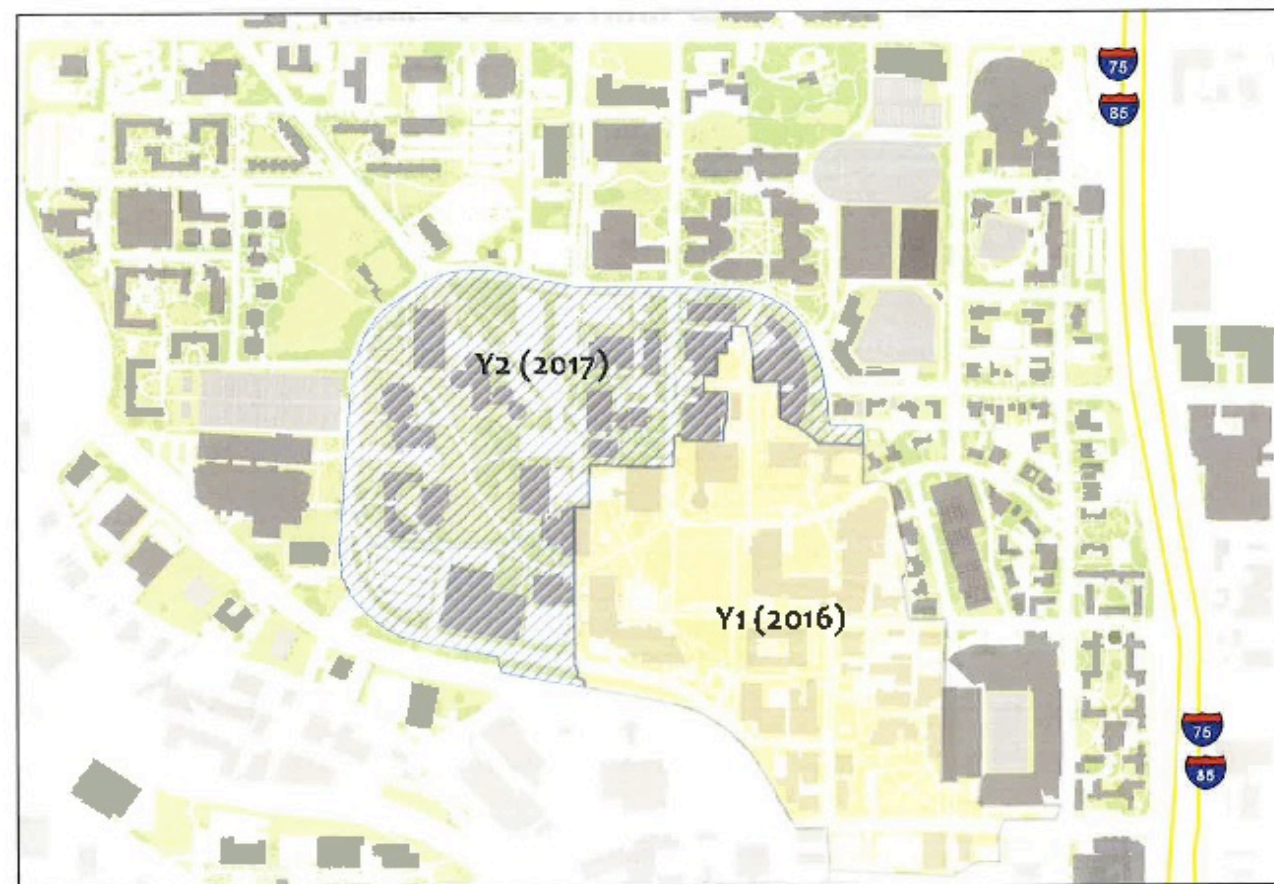
Also it assisted GT to become a Bee Campus USA. The GIS Tree Inventory is a living database and will be updated at regular set intervals. It identified pollinator species on campus and guide for future planting selections as well. On December 5, 2015, Georgia Institute of Technology and Bee Campus USA announced that Georgia Tech is the second university in the nation to be certified as an affiliate of the Bee Campus USA program, designed to marshal the strengths of educational campuses for the benefit of pollinators.



5 Year Campus Tree Management/Inventory Update Plan

With valuable information on campus trees, Georgia Tech in 2016 developed and implemented a 5 year Campus Tree Management/Inventory Update Plan as part of its strategic plan to include a five year pruning cycle, providing adequate equipment and trucks, a well-equipped maintenance shop, new planting, fertilizer, disease and insect control.

Tree re-inventory 5 yr maintenance cycle - Y1 & Y2 zones



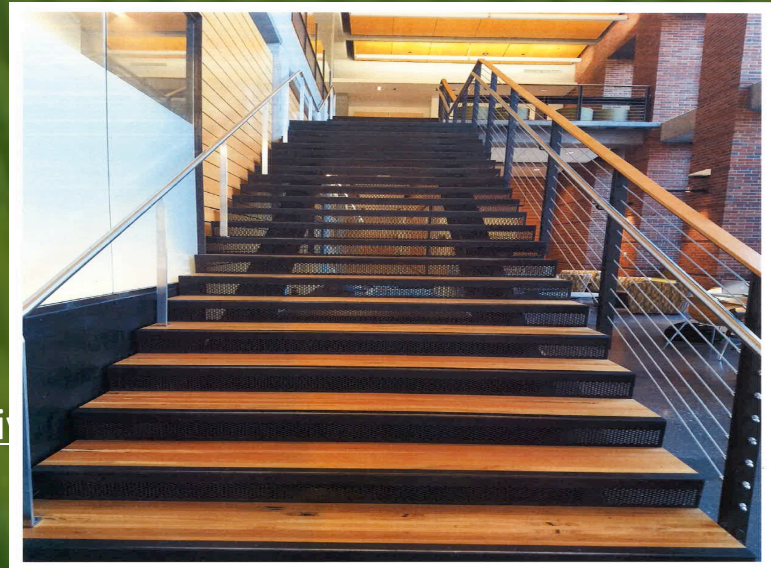
Campus Reforestation



Recycling & Reusing Landscape Materials

- EBB

Wood chips



Tree Removal & Tree Replacement

As part of Facilities-Landscape Services Tree Assessment Program (2015), eight trees totaling 329 caliper inches received Level 3 assessment (high risk) and were recommended for removal. Each of these trees has had two level 3 assessments to confirm the conditions of the trees.

As part of Georgia Tech's annual tree replacement plan, Facilities Management funds 100 – 150 trees to be planted annually on campus. This will replace 250 caliper inches of trees.

The Tree Bank has a \$10,000.00 annual endowment for tree replacement due to nature, diseases or insects infestation. The locations where trees were removed will be studied to determine where and how many trees can be replaced in the vicinity of those removed. During Hurricane Irma, 16 trees fell, total 400 caliper inches across campus.



Awards, Certifications & Recognition

- Georgia Tech Tree Campus USA since 2008, our 9th consecutive year winning, 1st in the state of Georgia and 10th in the nation
- Completed GIS Tree Inventory 2012
- Professional Grounds Management Society (PGMS), Landscape Management & Operations Accreditation 2015
- Professional Ground Management Society (PGMS) Green Star Awards 2015
- Georgia Urban Forest Council President's Award for comprehensive tree inventory and management practice 2015
- Georgia Tech Campus Arboretum 2016
- Georgia Tech Bee Campus USA 2016

Conclusion

It's a win-win situation to be recognized as a Tree Campus USA. Georgia Tech already had most of the 5 core standards required; therefore it was just a matter of putting the information together.

The biggest challenge was forming the Tree Campus Advisory Committee which requires getting people from various departments' together and recruiting students every semester as student members graduate. The committee members are very grateful for the support of the Administration in environmental stewardship programs at Georgia Tech.

Questions:

Contact:

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